A RETROSPECTIVE EVALUATION OF THE USE OF SeaWiFS IMAGERY TO PREDICT *KARENIA BREVIS* BLOOMS IN THE EASTERN GULF OF MEXICO*

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ABSTRACT

In October 2000, the Center for Coastal Monitoring and Assessement (CCMA) of NOAA used SeaWiFS imagery and NOAA's environmental buoys to correctly forecast the location of toxic dinoflagellate blooms, *Karenia brevis*, in south Florida. Anomalously high chlorophyll is the first warning flag in this forecasting algorithm, where the anomaly is defined as the difference between real-time and two-month running mean SeaWiFS imagery. We are evaluating the effectiveness of the algorithm when applied to SeaWiFS imagery using *K. brevis* cell count data collected by the State of Florida and through the Ecology and Oceanography of Harmful Algal Bloom (ECOHAB) Program. The evaluation addresses the following: (1) Does the algorithm accurately identify the presence, absence and/or bloom duration off the west coast of Florida?; (2) Does the algorithm perform better in particular regions of the eastern Gulf of Mexico?; (3) Is the predictive capability more accurate during particular times of the year. The overall purpose of this study is to evaluate the usefulness of the algorithm to monitor *K. brevis* blooms in the eastern Gulf of Mexico and to modify it, where appropriate, to provide more accurate detection.

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